SATURDAY, NOVEMBER 15, 1873.

ORIGINAL COMMUNICATIONS.

ON THE INHALATION OF NITROUS OXIDE, NITROGEN, HYDROGEN, AND OTHER GASES AND GASEOUS MIXTURES.

BY ELIHU THOMSON,

High School Laboratory, Philadelphia.

IN No. 100, vol. iii., of the *Medical Times*, appears a translation from the French of Drs. Jolyet and Blanche, on the protoxide of nitrogen, in regard to its effects upon living organisms. Having been independently pursuing the same or similar investigations for some time past, I take this opportunity of laying my results before those interested.

I was led to undertake the experiments described herein, by a consideration of the effects of the inhalation of nitrous oxide gas upon the different persons to whom I have seen it administered. There are certain marked effects produced by respiring nitrous oxide, which I believe are common to all persons,—certainly to those cases coming under my immediate notice.

The first marked effect of nitrous oxide inhalation is a quickening of respiratory movements, which effect continually increases up to the period of insensibility. In some cases the breathing is very rapid and laborious, two or three inspirations being made per second.

Another effect, that seems to be common to all cases, is that during the period of unconsciousness, so called, there is left scarcely more than a bare idea of existence: all other ideas seem to be obliterated. Another common effect is, that before the period of unconsciousness there is a confusion of ideas. The appearance of a person who has become unconscious from the inhalation of nitrous oxide is evidently that of asphyxia or suffocation. The countenance assumes a leaden hue, the eyes lose their lustre and have, instead, a vacant stare. These considerations led me to the conclusion that the effects, as above enumerated, were the results of true asphyxia, rendered bearable by there being furnished an inert gas with which the lungs may be filled and emptied as often as may be. The case may be compared to that of a hungry man satisfying the craving for food by eating clay or other inert substance, but who would certainly starve if the practice were continued, at the same time that he would require to make very *frequent* use of the clay to allay his hunger.

In order to become fully satisfied of the real state of the case,—that is, that the effects above cited are due to incipient suffocation or partial asphyxia,—a few experiments were tried.

It was naturally supposed that other inert gases, as hydrogen and nitrogen, should, if breathed, produce effects almost the same as those of the nitrous oxide, assuming the effects of the latter to be in reality due to asphyxia.

The following is an account of the experiments conducted, and the deductions from them:

Experiment I.—Pure hydrogen was prepared and placed in a small gas-bag, and breathed in the same manner as nitrous oxide is administered. A few seconds after commencing the inhalation, the breathing became rapid and labored, then a feeling of lightness ensued, followed by a decided confusion of ideas, an indescribable fluttering noise, a slight affection of sight, all tending to show the approach of unconsciousness.

The breathing of the hydrogen was discontinued just short of producing unconsciousness; and upon breathing air the return to a normal condition took place with great rapidity.

The above experiment was repeated by myself and another, with a recurrence of the same effects, which are evidently the results of partial asphyxia.

Experiment II.—A quantity of nearly pure nitrogen was prepared by a process not generally known, and, so far as I am aware, first employed by myself. When one volume of nitric oxide is mixed with four volumes of air, and the mixture thoroughly washed by water, about three and a quarter volumes of nitrogen are the result.

The nitrogen was breathed in the same manner as the hydrogen in the foregoing experiment, and was followed by the same effects, which, however, were produced much more slowly than in the case of hydrogen. The effects, too, were very much longer in passing off.

This latter fact is, doubtless, owing to the low diffusive power of nitrogen compared with that of hydrogen.

The effects of hydrogen and nitrogen, it will thus appear, do not differ from those of nitrous oxide. Of the three gases above mentioned, nitrous oxide is, in my judgment, least unpleasant to inhale, owing, probably, to its solubility in the blood giving it an exhilarative effect. It will, therefore, still continue to occupy the first rank in producing insensibility to pain.

It may be mentioned that in no case was any disagreeable after-effect produced by the inhalation of either hydrogen or nitrogen; and I am of the opinion that when the gas is shown to be pure there can be no danger for persons in sound health to make an experiment of this nature.

In order to test the matter in consideration still further, a few interesting experiments were instituted, as follows:

Experiment III.—A mixture of four parts by volume of hydrogen and one of oxygen was made. The mixture filled a large jar of a capacity of three and a half gallons.

A small kitten was then placed in the mixture, and the mouth of the jar tightly closed. The kitten manifested not the least inconvenience from breathing the mixture of hydrogen and oxygen, its effect not differing from that of common air, it being, indeed, air in which the nitrogen was replaced by another inert gas, hydrogen. The kitten remained in the jar fifteen minutes, when it was removed. It cannot be doubted that the limit to life exist-

ing in such a mixture would be when the greater part of the oxygen had been converted into carbonic acid. The gases remaining in the jar after the experiment were examined, and found to contain a notable quantity of carbonic acid. Another portion being fired by a lighted match exploded with considerable violence.

Experiment IV.—The same jar as used in the above experiment was again filled, but with pure hydrogen only, and the kitten placed in it as before. It immediately began gasping and showing signs of great inconvenience, and in less than fifteen seconds it had become motionless and insensible. On being brought into the air it recovered its normal condition in a few seconds. It gave no manifestation of pain on being pinched while insensible. In this experiment the insensibility is clearly seen to be due to asphyxia, or a want of oxygen, which was absent.

This experiment was repeated, coal-gas, well purified, being substituted for the hydrogen. Insensibility followed very rapidly, and on withdrawing the kitten from the jar it manifested no signs of vitality, except an irregular heart-action. The breathing had entirely ceased. Artificial respiration soon induced a succession of convulsive movements as of breathing, which gradually became regular, the kitten at the same time manifesting symptoms of returning vitality.

Consciousness was at last restored. There existed insensibility to pain up to the time of regaining consciousness. The experiment occupied about five minutes.

From this it would seem that coal-gas not only asphyxiates, but at the same time exerts a poisonous influence, causing entire cessation of breathing.

Experiment V.—A kitten was placed under the receiver of an air-pump and the air exhausted until the mercury in the barometer-gauge stood at six inches, which would leave but one-fifth the original amount of air in the receiver. The effects upon the kitten were nearly the same as with pure hydrogen (Exp. IV.), it soon falling over motionless and insensible. On allowing the air to re-enter the receiver, the kitten was restored in an exceedingly short space of time. This experiment was made with a view to comparing it with that which follows.

Experiment VI.—The same receiver, of capacity of about two and a half gallons, as used in Experiment V., was entirely exhausted of air and filled with pure oxygen gas. The kitten was then placed in the receiver so filled, and the oxygen exhausted until the mercury stood, as before, at six inches, leaving one-fifth the original weight of oxygen still in the receiver in an expanded state. In this partial vacuum the kitten remained twenty minutes, during the whole of which time it manifested not the least sign of inconvenience, sitting quietly, and showing attention when called or otherwise disturbed. The partial vacuum contained as much oxygen as is found in the same bulk of air. The vacuum was as good at the conclusion of the experiment as at the beginning.

This last experiment showed clearly that the rarefaction had no effect on the life-supporting power, provided that the requisite amount of oxygen was present.

The above experiments lead me to adopt the following conclusions:

1. That the insensibility produced by the inhalation of nitrous oxide, nitrogen, hydrogen, and rarefied air is due to deficiency of oxygen, of which asphyxia is a result.

2. That the inert gases, nitrogen, hydrogen, etc., as well as a vacuum, are rendered capable of supporting life if a proportion of oxygen approaching that existing in common air be introduced.

I cannot agree with the conclusion of Messrs. Jolyet and Blanche that the respiration of nitrous oxide is at all dangerous if stopped at the proper time, for the experience of all who have used it shows that the asphyxia it produces leaves no harmful effects.

ON THE TREATMENT OF FRACTURES OF THE LOWER EXTREMITY OF THE RADIUS.

BY JOHN ASHHURST, JR., M.D.,

Surgeon to the Episcopal Hospital, Surgeon to the Children's Hospital, etc.

MORE than forty years ago Mr. Lonsdale enunciated the doctrine that fracture of the *shaft* of the radius should be treated by placing the forearm in a supine position, rather than in a position midway between supination and pronation, as was then, and as is still, done by the majority of surgeons. The reasoning by which Mr. Lonsdale enforced his opinion has always seemed to me just and conclusive, and his plan of treatment has met with the approval of many eminent authorities, among whom may be particularly mentioned M. Malgaigne, Mr. Callender, of London, Prof. Hamilton, of New York, and the late Prof. George C. Blackman, of Ohio. None of these gentlemen, however, with the exception of Mr. Callender, appears to have employed the supine position in the treatment of radial fracture, when the lesion has been situated below the point of insertion of the pronator radii teres. Mr. Callender extends the practice to all cases of fracture above the limits of the pronator quadratus, and by so doing has, in my judgment, taken a step decidedly in advance of his predecessors.

It is my object in this communication to go still further, and advise the employment of the supine position in the treatment of all cases of fractured radius, no matter what point of the bone may be involved, and whether the ulna is or is not also broken.

Some years ago I observed that more or less impairment of the power of supination remained after recovery in many of my cases of fracture of the lower extremity of the radius—Colles's, or, as it is more commonly though less correctly called in this city, Barton's fracture—which I had up to that time invariably treated with the forearm in a semi-prone position: indeed, almost the only cases with the result of which I was quite satisfied were those in which there was sufficient impaction of the fragments to

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prevent any axial rotation of one upon the other. Hence I resolved to employ the supine position in these, as well as in the cases for which it was originally recommended by Lonsdale; and my experience has been so gratifying that I feel justified in recommending a trial of the plan to my professional brethren.

Axial displacement is no doubt less apt to occur and less marked in fractures through the broad carpal extremity of the radius, than when the shaft of the bone is the part involved; but I believe that it does occur, and that it deserves more consideration than it has commonly received. The muscles which supinate the upper fragment in these cases, as in those of fracture of the radius at a higher point, are the biceps and supinator brevis, which readily overcome the opposing action of the pronator radii teres; the supinator longus, attached to the styloid process of the radius, assists in producing the characteristic deviation of the hand toward the radial side; while the pronator quadratus, often lacerated by the edge of the upper fragment, draws the radius toward the ulna and thus tends to obliterate the interosseous space. What now is the necessary effect of fixing the limb in the semi-prone position, as ordinarily directed? Obviously, the upper fragment which cannot be fully controlled by the splints will be, in some degree at least, thrown into a state of supination by the muscles first mentioned, while the pronator quadratus is given the best opportunity to obliterate the normal space between the bones and thus allow the formation of callus in an undesirable position, the supinator longus, too, exerting a constant force which the surgeon hardly overcomes by using Dupuytren's ulnar splint or one of its numerous modifications.

The adoption of the supine position appears to me to obviate these difficulties; axial deformity is prevented, because both fragments are supinated to the same degree; the interosseous space—small at best in this part of the limb—is not encroached upon, for the position of supination and the even pressure of a well-padded palmar splint prevent the contraction of the pronator quadratus muscle; and the relaxed supinator longus has less tendency to maintain that abduction of the hand which has so often baffled the surgeon's efforts in the management of this injury.

The only objection to the mode of treatment which I have recommended is that, should the case be complicated with a luxation of the lower extremity of the ulna, the position of *extreme* supination would render it more difficult to keep the dislocated bone in place; but this difficulty may be obviated by making the pad which is placed upon the palmar surface of the limb broad enough to press directly upon the projecting ulna, and by limiting the degree of supination to an angle of from 120° to 130°.

With regard to the mode of carrying out the plan which I have advocated, I may say that I have been able to meet every indication by using the customary palmar and dorsal compresses, with either two straight splints or an ordinary "Bond's splint," such as is commonly employed in this city. The only point in which my practice differs from that of my neighbors is that I apply the dressings while the injured limb is in a state of supination, and that I keep it supinated during the whole course of treatment. I may add that I have found no objection whatever on the part of patients to maintain the required position, the supinated forearm being comfortably supported during the day in front of the body in a broad handkerchief sling, and extended at night, still supinated, upon a soft pillow.

ON THE TREATMENT OF ULCERS OF THE LEG BY CIRCUMCISION.

BY E. T. BRUEN, M.D.,
Resident Physician, Philadelphia Hospital.

IN the issue of the *Medical Times* for June, 1873, an article appeared, taken from a German journal, stating that chronic, extensive, and otherwise intractable leg-ulcers had been successfully treated by an incision around the circumference of the ulcer down to the deep fascia. If care was taken to prevent union of the cut surfaces, a rapid cure was effected under the use of a simple water-dressing. Two cases were treated in the surgical wards of the Philadelphia Hospital during the past summer; and, thinking that the results might interest some, I shall give their history, as follows. Their perusal will probably indicate why further trial of circumcision was not made.

Charles Garton, æt. 61, admitted to the hospital January 21, 1873. He had a small ulcer situated on the anterior and outer surface of the leg, midway between the ankle and the knee. He was treated with various dressings, but without success, until last June, when it was determined to try circumcision. This was accordingly practised about the 1st of June by my predecessor, with the following results. The tissue included between the line of incision and the ulcer immediately commenced to slough, so that in a few days the ulcer was enlarged about one inch all around; but the mischief did not stop here, for the ulcer continued gradually to spread, in spite of every application which could be suggested. The surface was twice brominized, but, notwithstanding, an abscess formed in the tissues over the ankle-joint, while the man's general health rapidly declined. Another abscess formed in the upper third of the leg, dissecting between the muscles; a third was formed in the calf, and death from septicæmia and exhaustion was feared. Under nourishing diet and suitable treatment, he gradually recovered his usual health; but before the spread of the ulcer was checked it had extended nine inches longitudinally, and five inches, or nearly around the limb, transversely. The surface has been slowly healing for the past eight weeks, and is now almost entirely well; but it occupied three months to restore him to the condition he was in before the trifling operation.

The other case was in a man—Robert McCauley, æt. 60—admitted to the hospital during the month of March, 1873. He had a small ulcer situated in the calf, in the middle third of the leg. He had suffered from it for at least fifteen years, but it had been entirely healed several times during that period. An incision about one and a half inches from the margin of the ulcer was carried around it. The tissue speedily sloughed, and the ulcer gradually increased in depth and extent: finally, an

imperfectly-nourished, callous cicatrix formed over a portion of the surface, and the ulcer remained more intractable than before. After many fruitless attempts to heal it, the man was etherized, and the hardened callous tissue was removed, the entire surface being afterwards cauterized. The resulting ulcer is at present about five inches in diameter, the same extent longitudinally, and is now showing a tendency to cicatrization; but the man states that it is larger than it has ever been previously.

It does not appear to me that cell-change is sufficiently active, nor is the vitality of chronic leg-ulcers of such a character as to justify the danger of enlarging the pathological surface when the morbid conditions can be treated by numerous other measures not open to such objections. The subject is so trite that I should not have ventured to report these cases had I not been aware that the method of treatment has been somewhat discussed. It is proper to add that both these cases seemed favorable for a fair trial of this new mode of treatment, as both men enjoyed excellent health.

October 22, 1873.

CASE OF TWINS CARRIED SIX MONTHS —JAUNDICE, ASCITES, ETC.

BY COMEGYS PAUL, M.D.

ON the 14th of February I was called to see Mrs. M., aged 29. In June, 1872, she was taken with an acute attack of jaundice, which, in a measure, shortly subsided. The yellow color, however, never entirely disappeared, and at different times was of a more decided hue than at others. Her general health in the mean time was apparently moderately good. She menstruated freely, naturally, and with regularity, until the middle of the following August, when the catamenia ceased, and she began shortly afterwards to exhibit signs of pregnancy. After the lapse of four months she felt the quickening of the child, and its movements were very perceptible to her till the second half of the sixth month, when they ceased; a slight secretion of milk entirely disappeared, the breasts became flaccid, and she gave other evidence of carrying a dead fœtus. Still she continued to increase in size, and, becoming very much prostrated with attacks of acute pain, her friends became anxious about her, and determined to change their physician, who gave them an unfavorable prognosis, saying she had cancer of the liver.

This is the history so far as I could obtain it from the patient and her husband.

When I saw her in the middle of February my attention was particularly attracted to the bright-yellow color of her complexion, the abdomen enormously distended from ascites, the general anasarca, and the distressed expression of her countenance. Her pulse was 90, strong; her respiration oppressed by the abdominal distention. The day before, she had had a copious epistaxis. Vaginal examination showed an enlarged uterus, but its extent could not be determined, because of the excessive quantity of water surrounding it. The os uteri permitted the introduction of two fingers, but the examination was otherwise unsatisfactory. The next day, with the assistance of my friend Dr. J. R. F. Bell, I could make out the presence of a child's head, and we decided upon the propriety of inducing labor the following day.

Unfortunately, this delay was fatal to her. That very night she expelled two small children, one alive, and the other dead,—apparently for some time,—and, as medical aid was not at hand at the time, she had excessive and fatal hemorrhage. They had neglected to send for a physician until the children were born, and when I arrived she was in a condition alarming in the extreme. The surface was blanched, and her pulse scarcely perceptible, but the hemorrhage had stopped. She was unable to swallow, and exhibited the jactitation so common to similar cases. She was conscious till the end, and died a few minutes after my coming.

Autopsy, nine hours after death.—Body emaciated, but not extremely so. Surface of a very pale yellow. Brain not examined. Lungs and heart healthy, except a slight congestion of the former, due to labored breathing, from their confined thoracic space and the inability of the diaphragm to move because of the upward pressure of ascites. Abdomen enlarged and umbilicus protruded; when opened, about five quarts of a yellowish, viscid fluid flowed out. The *liver* was enlarged and congested, but showed no signs of abscess, nor the dense fibrous appearance due to scirrhus. It seemed more like a simple chronic congestion. The common bile-duct was much reduced in calibre, and the gall-bladder distended. Stomach healthy. The uterus was of the size we would expect at the sixth month of gestation; the tissue flabby and pale; the os was patulous, and the sinuses uncontracted. The kidneys were congested, and the ureters thickened and slightly distended. We had no opportunity to examine the urinary secretion.

PHILADELPHIA, 326 SOUTH SEVENTEENTH STREET.

ON HÆMATURIA.

BY W. D. MARTIN, M.D.,

Pennsylvania Steel Works.

IN vol. iii., on page 66, of the *Medical Times*, I reported a case of hæmaturia, bloody urine being the solitary symptom of the case. It was without pain or uneasiness, apparently without sufficient cause, and at that time, October 15, had continued for ten months in spite of the use of astringents and hæmostatics actively employed. The patient was then placed upon phosphate of iron and the valerianate of zinc, as there mentioned, and continued their use during three months, greatly to the improvement of his general health, but without particular benefit to the hemorrhage, which still continued.

In November he abandoned medicine entirely, and was advised to practise cold ablution of the parts twice every day; and he faithfully followed these directions for more than nine months, or until August, 1873, hæmaturia still persisting. The

gentleman in the interim was in active pursuit of business as before, taking much exercise and enjoying perfect general health.

On August 14, the discharge was apparently worse than ever, being, as he says, "formidable in appearance, and very bloody." Upon rising the next morning, however, the urine was clear, normal in appearance, and without blood; nor did blood subsequently reappear. And thus, being at that time on a visit to the same place (Monroe County, Pennsylvania) where he had acquired the affection, he finally left it there. He now considers himself well.

Referring to the source of this hemorrhage once more, I will observe that it was probably from varicose vessels. I will not attempt to explain the singular manner of its cessation, but will state, finally, that the diuretics and astringents employed in the case probably aggravated it.

October 30, 1873.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

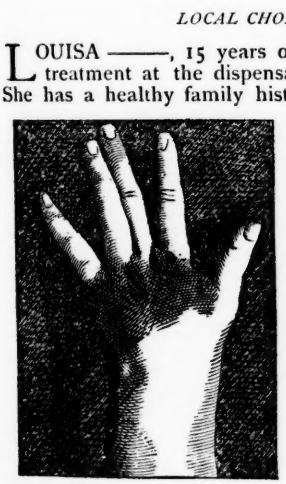
SERVICE OF DR. H. C. WOOD,

Clinical Lecturer on Diseases of the Nervous System.

Reported by Dr. LOUIS STARR.

LOCAL CHOREA.

LOUISA ——, 15 years of age, first applied for treatment at the dispensary on April 17, 1873. She has a healthy family history, and enjoyed good health herself until five years ago, when she had scarlet fever. During convalescence from this, she had an inflammatory affection of the right side of her face, probably erysipelatous in character, and associated with much swelling, redness, and pain. Shortly after the latter—which lasted two weeks—had subsided, she began to have contractions of the muscles of the left arm and leg, and a feeling of numbness extending over the right side of the body. The muscular contractions were often severe enough to flex the forearm upon the arm, and the leg upon the thigh, and keep them so for a week or more: they occurred, however, only at intervals, and have been entirely absent for the past year. She began to menstruate ten months ago, and since then has been perfectly regular.



When she came under observation, although able to flex and extend the left arm and fingers and pronate and supinate the hand, there was some want of co-ordination, the movements being awkward and constrained, with a tendency to pseudo-chronic spasm, but without any trembling or jerking. When the arm was held out from the body, the fingers were bent backward, and the hand from time to time assumed various positions, according as the flexors or extensors predominated over each other.

She was ordered gr. xx of potass. bromid. three times daily, with ung. belladon. applied to the arm. This treatment was continued from April 17 to June 12, when it was suspended, and she was directed to take three times daily one-fourth grain of argent. nitrat.

This was continued for some time without avail. Galvanization, both by the descending continuous current and the rapidly interrupted faradaic, was also tried, but did no good; and the patient was finally discharged unbenefited by treatment.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS, M.D.

Reported by J. B. ROBERTS.

OVARIOTOMY FOR THE REMOVAL OF A MULTILOCULAR CYST.

THIS woman, 30 years of age, has suffered for nearly four years with a cystic tumor of the ovary, which has been tapped twice within the past six months, twenty-six quarts of fluid being drawn off at the first operation, and nineteen quarts at the second. The fluid has re-accumulated in large quantity since the last paracentesis, and she now comes to the clinic to have the tumor removed by ovariotomy.

The ovary is subject to various growths, both benign and malignant. Of these the most common is the cyst, which is unilocular or multilocular, and may be filled entirely by serous fluid or contain solid material in addition to the fluid. The diagnosis between these tumors of the ovary and other affections in the same situation is often exceedingly difficult, and there are recorded numerous instances in which the surgeon, after opening the parietes of the abdomen, has found to his dismay that there was no ovarian tumor whatever, but disease of the uterus, liver, or kidney.

Ascites may be mistaken for ovarian dropsy; but there are distinguishing features which will usually render the diagnosis sufficiently clear. In ascites the effused fluid is influenced by the patient's position, gravitating to the posterior part of the abdominal cavity when she is recumbent, and falling to the lower portion as the erect posture is assumed; but in dropsy of the ovary very little effect is produced by these changes. Then, again, the belly in ascites is distended generally, while in cyst of the ovary the effusion is primarily developed to one side of the median line, though it does gradually extend entirely across the abdomen; and, moreover, the cyst as it increases in size rises out of the pelvis and draws the uterus up with it, so that the neck of that organ may be almost beyond the reach of the finger introduced into the vagina. Another point of diagnostic value is the state of the health, which in peritoneal effusion is nearly always bad, since the dropsy is a manifestation of some organic disease. In ovarian trouble, however, the constitution frequently remains unimpaired for a considerable time.

Tumors connected with the liver and spleen, and enlargement of these organs, can be recognized by the fact that they increase from above downwards, and not from below upwards. A most extraordinary case is recorded in which renal cyst, or dropsy of the kidney, was mistaken for ovarian disease, and the woman's abdomen opened for the removal of the supposed cystic tumor of the ovary.

In the treatment of ovarian cysts, tapping is frequently resorted to as a palliative method, in order to lessen, by removal of the fluid, the mechanical inconveniences arising from its presence; but if the operation has been performed once it will usually be required soon again, as in a case where paracentesis was performed nearly sixty times within a year.

Since this woman has been tapped twice already,

and the fluid has so rapidly reaccumulated, it seems proper to attempt the extirpation of the cyst by ovariotomy, which, as the tumor appears to contain no solid matter, shall be performed by the short incision.

It is important to see that the bowels and bladder of the patient are emptied, and that the room is kept well warmed during the operation. An incision two and a half inches in length is then made through the linea alba, extending from the pubes upwards, which opening, if the adhesions are not extensive, will be sufficiently large to admit of the removal of the tumor, especially as its contents will be previously drawn off by the trocar. After the superficial incision has been made, a probe-pointed bistoury is introduced, and the muscular wall of the abdomen laid open, exposing the cyst to view, which proves to be multilocular, and when punctured gives a thick yellowish fluid of the consistency of soft soap.

I now seize the sac and endeavor to draw it out through the incision, rupturing with the finger or dividing with the knife the adhesions holding it to the adjoining viscera. It is firmly adherent to the omentum; and, as the attachment is very vascular, a ligature is placed around it before it is cut.

After the cyst is drawn through the opening, the pedicle by which the tumor is attached to the ovary is divided, having been surrounded by a clamp, in order that there may be no possibility of hemorrhage. After all the blood that has fallen into the abdominal and pelvic cavities has been thoroughly removed by perfectly clean sponges, lest peritonitis or pyæmia be induced, the stump of the pedicle, embraced by the clamp, is brought out at the lower extremity of the incision. The edges of the wound are then brought together by several points of interrupted suture, and four pins passing through the muscles and parietal peritoneum. It is necessary to leave an opening at the lower part of the wound, to insure drainage of the effused fluids, the retention of which might induce septicæmia.

An oiled compress is placed over the wound and held in position by long strips of adhesive plaster, after which a mass of cotton is laid on the abdomen and the patient's body surrounded by a broad bandage of flannel. The bowels will be locked up by opium, and the woman kept perfectly at rest, in a room well warmed and free from draughts of air, with her legs flexed on the pelvis, to relax the muscles and thus prevent tension upon the contents of the abdomen. If effusions of a serous or purulent nature occur, the pelvic cavity must be washed out with tepid water and chlorinated soda or permanganate of potassa by means of a syringe, lest the accumulation of these fluids within the pelvis set up inflammation or induce pyæmia.

TRANSLATIONS.

SYMPTOMATOLOGY OF MYELOGENIC LEUKÆMIA.

THE pathology of leukæmia (Prof. F. Mosler: *Virchow's Archiv*, 1873) has of late been made much richer by the cases observed by Neumann and Waldeyer. In the case of the former a characteristic alteration of the marrow of the bones was observed, and these observations were confirmed by the case of the latter observer, in which there was a diffuse hyperplasia of the marrow. In neither of these cases was it possible during life to note the symptoms more definitely; but within a short time Prof. Mosler has had a case of leukæmia under his observation, in which, at the autopsy, he found an affection of the marrow, as if resulting from purulent osteomyelitis, extending over the entire skeleton, and during the life of the patient symptoms indicative of this disease had been noted by him.

The history of the case was of particular interest, as it would lead to the supposition that the primary disease was not one of the bones, but of the spleen. The patient was a laborer, aged forty-four, who had suffered from intermittent for a long time, followed at last by pains in the left side, where also a tumor had been observed. The leukæmia appears to have started as the result of an injury in the region of the spleen. The patient, in the act of mounting a horse, fell, his left side striking upon the pommel of the saddle. The injury was severe enough to induce an inflammatory condition of the spleen, and this was followed by the leukæmia. At the time he was admitted to the clinic the patient presented a typical case of splenic leukæmia. The splenic tumor filled more than half the abdominal cavity. The lymphatic glands were not involved. A drop of blood when examined under the microscope contained more than one-third white corpuscles. The reaction of the blood was alkaline. The patient presented febrile symptoms of a high grade in connection with pains in the splenic region, pointing to a state of chronic inflammation. One symptom—great tenderness over the sternum, so that the least movement gave rise to intense pain—was noticed by Prof. Mosler for the first time in this case. At first he looked upon this tenderness as a nervous symptom; but later he noticed that great sensibility of the thorax was present at points under which swollen lymphatic glands were situated. This idea was strengthened by the fact that the patient had a cough with expectoration. The autopsy revealed the cause of this condition to be the disease of the bone existing in the sternum. Death took place suddenly, and was caused by a profuse hemorrhage of the stomach, due to follicular ulceration of the mucous membrane of that organ.

In opening the thorax at the post-mortem examination the sternum was broken near the manubrium, and a yellow substance, looking like pus, poured out from the broken surfaces. When the sternum was sawn through, the interior presented a dirty grayish-white hue, and in the body of the bone were found cavities, some of the size of a pea. Towards the lower end was one of the size of an almond, which gave the impression of an abscess in the bone. The cortical portion of the bone was intact over all the cavities. The marrow of a vertebra from the lumbar region, and also that of a femur, presented the same dirty yellow color as that of the sternum. The vessels of the marrow were in some places found crowded with white blood-corpuscles. The external part of the bone and the periosteum were normal. A more accurate examination revealed a hyperplasia of the entire marrow of the bones.

The corpuscles in a state of transition from white to red, described by Neumann, could not be found in the body. The spleen presented the usual characters of leukæmic tumor of that organ: it was very hard, had grown fast to the abdominal walls, and contained numerous spots which had been centres of inflammation. No anomalies were found in the lymphatic glands. The case, then, was one of leukæmia with secondary involvement of the marrow of the bones, and it for the first time demonstrates the existence of certain symptoms during life in myelogenic leukæmia. In this case the disease gave evidence of existence by a marked tenderness over the sternum. The hollow bones, however, during life, gave no symptoms that would induce a suspicion of the disease existing within them.

WILLIAM ASHBRIDGE, M.D.

ACTION OF THE MORAL NATURE ON THE PHYSICAL.

UNDER this title, Dr. Cornette (*Annales Médico-Psychologiques*, March, 1873) gives two very interesting cases in which entire loss of hair, with change of voice, resulted from depressing emotions.

The first case was that of a perfectly healthy gardener, forty-five years of age, who, after undergoing considerable mental disquietude, through fear of impending poverty, for several weeks, found his hair suddenly growing white and at the same time falling out.

In a few days his head became almost completely bald, the few hairs which still remained in the form of a circle around the temples and occiput being straight, fine, sparsely scattered, and white as snow. His hair had previously been curly, abundant, and quite black. His beard rapidly became affected in a similar manner, and later the hair had entirely disappeared from all parts of the body.

At the same time, his voice, which before had been strong and full, became quite feeble and low in tone, and his whole appearance was that of a man of seventy-five. His health, however, was perfectly good.

Five years later his condition was nearly the same. He was quite melancholy, and but a few hairs, of a downy nature, remained on his body. His voice was still feeble.

The other case was that of a gentleman, fifty-six years of age, in political life and much harassed by public and domestic anxieties.

One morning on awakening he found a large quantity of hair in his night-cap, and, running his hand through that which remained on his head, it came out by handfuls.

Within a very short time he had lost not only all the hair on his scalp, but also that on the chin, and, finally, on all parts of the body.

After six years this gentleman's condition remained the same. His skin had returned to the smoothness of infancy: one would never believe it had been otherwise.

His general health remained good, but, like the previous case, his voice was nearly lost at first, and even after several years was still quite feeble.

A. VAN HARLINGEN, M.D.

TRAUMATISM IN THE INSANE.

DR. CHRISTIAN (*Annales Médico-Psychologiques*, July, 1873) remarks that it was formerly thought the insane did not suffer from cold, heat, or injuries. Observation, however, has proved this idea an incorrect one.

Some authors have maintained an antagonism between insanity and various diseases, and, on the other hand, that insanity predisposes to other disorders.

Without taking up the subject of the relations of insanity to disease in general, Dr. Christian confines himself to the consideration of traumatism in the insane, and adduces a number of cases of injuries of various kinds in such patients. His conclusions are as follows:

Wounds.—Dr. Christian's observations confirm those of others, to the effect that, whatever the form of their mental affection, traumatic lesions in the insane are easily cured. Sometimes the most grievous wounds heal by first intention.

Burns.—These result as favorably as the foregoing.

Fractures.—Although it has been stated by some that fractures in paralytics are recovered from slowly, yet Dr. Christian's experience leads him to believe that, unless when influenced by accompanying depression, they get well with the usual rapidity.

Bedsores.—Dr. Christian's observations incline him to the conviction that bedsores are no more frequent among the insane than among fever or other patients confined to bed under similar circumstances. Of course such sores are more frequent among paralytics, condemned as they are to a prolonged decubitus, and having incontinence of urine as a usual accompaniment.

Dr. Christian further remarks that many cases might be cited where grave wounds have constituted a critical phenomenon of delirium.

It is concluded that the profound modification which insanity impresses on the organism is not of a nature to cause wounds to take on a bad character.

That state of comparative insensibility to pain often noticed in insane persons, Dr. Christian thinks, is only apparent, and is dependent for the most part on the concentration of the faculties on fixed predominant ideas.

It would be interesting to collect facts relative to the results of surgical operations on the insane; but no materials for that purpose exist as yet.

Finally, it is concluded that, taking into consideration the advantages of fresh air, etc., which many insane asylums present, their patients are cured neither more nor less quickly than other wounded persons.

A. VAN HARLINGEN, M.D.

EXTIRPATION OF THE RECTUM.

THE extirpation of the rectum, with the formation of a musculo-cutaneous perineal flap, according to Hueter (*Deutsch. Zeitschrift f. Chirurgie*) is a method by which the difficulties and dangers incident to the operation as usually performed are avoided. The usual dangers, as enumerated by him, are the following four: hemorrhage from the hemorrhoidal arteries which are necessarily cut, the difficulty of their ligation, possible injury to the peritoneum, and, finally, incontinence of fæces.

The first act in the operation consists in the formation of a tongue-shaped flap, with the free convex end looking towards the scrotum, the base being bounded by a line joining the tubera ischii. The sphincter ani must next be separated, and the muscular tissue and mucous membrane of the rectum cut obliquely through at a point one centimetre above the anus, so that the entire ring of the anal opening is contained in the flap, and this is then thrown back. The bleeding vessels having been ligated, the extirpation of the gut is to be proceeded with. The edges of the wound are to be united with sutures,—those in the back part of the wound being first applied,—and the flap is then to be drawn into its old place and fastened by stitches. The after-treatment is made much easier by the fact that the fæces traverse the normal canal and do not soil the edges of the wound. This method of operating was tried in two cases: the first patient was a drunkard, who, after the operation, was attacked with delirium tremens and finally died of pneumonia; the second recovered without any bad symptoms, and left his bed two weeks after the operation.

WILLIAM ASHBRIDGE, M.D.

DIVISION OF THE SPINAL CORD IN THE NECK (*Indian Medical Gazette*, September 1, 1873).—N. B. Baillie records the case of a woman who lived for six hours after receiving a blow with a hatchet which cut through the third spinous process and the back part of the fourth cervical vertebra, dividing the spinal cord completely, and penetrating into the body of the vertebra in front of the spinal canal.

PHILADELPHIA

MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, NOVEMBER 15, 1873.

EDITORIAL.

PROFESSIONAL ADVERTISEMENT.

"WHERE are you going to draw the line?" said a friend to us, after reading our editorial of last week. To such inquiries we now reply, once for all, We do not intend to draw the line at all. That is not our business. A medical journal is not an autocrat, that it should settle what rules are to govern the profession. The line is drawn for us, and drawn sharply, by the Code of Ethics of the American Medical Association.

Though it be not a right of journalism to prescribe rules and make regulations, yet it is in its province to see that they are lived up to. More than this, as the representative of the whole profession, it is the bounden duty of an independent journal, so far as lies within its power, to see that no injustice is done to any portion of the profession,—that all have equal chance in the struggle for existence.

The point we want especially to raise to-day is the injustice of allowing Dr. Sly to covertly advertise or to be advertised because he is connected with some hospital, whilst Dr. Straightforward is hooted at and denounced because, not having the same opportunities, he advertises in a different and more open manner.

To this, when stated broadly as a general principle, we suppose no one will object. General principles hurt no one, and their enunciation usually is as sounding brass and a tinkling cymbal.

It is the application, not the mere dead lash, that makes the smart, but it is the smart, after all, that causes the boy to mind his steps. The lash—the general principle—without the application, he little cares for. Now we propose to make the application; but, before doing it, we want to deny emphatically and finally that any *individual* is being attacked. If any feel the random stroke, he probably deserves it: if so, provided he do not complain, he may comfort himself by the assurance that neither we nor his colleagues know that he has been struck.

The first specific evil of which we propose speaking is a practice of the renowned Pennsylvania Hospital. Day after day there appears in the public press an advertisement not merely stating that the wards are open to the sick, but giving also in full the names and residences of the physicians and surgeons on duty. It is against the continuance of this that on behalf of the general profession we desire to protest.

The first reply to our objection to it will no doubt be, The staff does not do it, the managers do it; the staff is not responsible for the actions of the managers. We acknowledge that there is force in this. Yet we doubt if the force is any better than weakness. Does any one suppose for a minute that if the medical staff of the hospital were officially to state to the board that to have their names and places of residence published in the daily papers was derogatory to their professional dignity and injurious to their professional status,—does any one suppose that if this were done the board of managers would prove such a set of churls as to refuse to modify their public cards? We certainly do not. "*Shall not suffer* to be," says the Code.

Again, it will be said, Pennsylvania Hospital has advertised in this way from time immemorial.

We cannot see, however, what this has to do with the main issue. Let us not darken counsel with words. The sole question is, "Is, or is not, the publication of the Pennsylvania Hospital's card such an advertisement of the physicians in the daily press as shall redound directly to their personal advantage?" Moreover, it is very possible that a custom harmless in a small community will be a gross injustice in a large one. When there were but fifty thousand people, but thirty thousand possible desirable clients, in our city, a man who held a public medical position was, of necessity, known by almost everybody. But since the multitude has swollen to a million, connection with a public hospital can, in a legitimate manner, only bring a physician before a mere fraction of the people. A stranger in a

village is known in a week of all men; in London he is as a speck floating on the Atlantic.

Hence, as a community increases in size, the advertisement in the public press of a physician, as a man of attainments, becomes of more and more value. Moreover, as the density of population increases, the struggle for existence becomes more and more intense. Advantages which in a small, scattered community may amount to very little, in the dense centre may make the difference between poverty and fortune, success and failure.

It was bad enough when our city was smaller, but to-day it is a hundredfold more unjust, to allow one man's name, under cover of a board of managers, to be placed before the people, and to forbid the appearance of that of another because he has no board of managers behind which to shelter himself.

A stranger comes to the city,—feels ill,—has heard, perhaps, of the Pennsylvania Hospital, for the fame of it is all over the land,—knows not what physician to go to, but remembers to have seen the card of the hospital in the morning paper, and, looking it up, sends for the physician or the surgeon advertised therein.

This is no improbable fancy sketch; but a few weeks ago a very analogous incident came under our notice.

In a certain stratum of society in our city, a "head doctor" of "Pennsylvania Hospital" is almost a medical demigod; and who can tell how many office-visits the holders of these envied positions yearly owe to the advertisement of them, paid for by the contributors of the hospital?

We do not want to be misunderstood. We do not charge the medical staff of the hospital with in any way instigating or being responsible for the practice. It is an old but a very bad custom, far more honored in the breach than in the observance,—a custom which becomes more and more contrary to the spirit of the Code of Ethics,—one which is opening the door for a flood of general medical advertising,—a custom which must be abandoned if our Code of Ethics is to be maintained in its purity.

We do not deny that the practice confers some advantage upon the hospital,—facilitates, perhaps, the admission of patients, and increases the fame of the institution. We do deny that it is in any sense necessary to the hospital. Let the card be put in simply with the position of the hospital and the daily hours at which the staff is in attendance for the purpose of admitting patients, and will any one assert that the sick or the wounded will not be able to gain admission? Is the fame of the institution so slight that its clientèle would diminish even if it did not advertise at all?

It cannot be. The importance of the practice to the hospital must be very slight. Its value to the staff may be great; it is notorious that a position in the hospital insures success in practice; and who can tell how much of that success is due to this daily advertisement? The harm done to the general profession is, however, also very great, the influence for evil reaching much farther than appears at first sight. But we cannot trace this to-day; our columns are too crowded by other matter. In our next issue we shall attempt to do so, and to show that the only correction for the growing evil is the abandonment of this practice by the Pennsylvania Hospital. Will the medical staff request it of the general board?

IT is some comfort to see that others are worse off than yourself. According to the following, which we extract from an exchange, the Philadelphia Hospital is not, after all, the worst in the world:

"At Benguela, in Angola, says the *Correio do Sul*, the military hospital is in such a state that wolves have entered it in search of human flesh. The *Correio Medico de Lisboa*, commenting on this, says, 'Speaking plainly, our colonies, as regards the hospitals, are for the most part the most perfect examples of carelessness, indifference, and contempt of humanity that can possibly be found.'"

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held October 8, 1873, at 8 o'clock P.M.,

VICE-PRESIDENT DR. H. ST. CLAIR ASH in the chair.

Dr. WASHINGTON L. ATLEE referred to an interesting and unusual case that came under his notice October 5, 1873. The patient was a maiden lady, aged 52 years. At his first interview he found her suffering the most intense agony, particularly in the lumbar region. She had been occupying a sitting position on the edge of a sofa, with her feet on the floor, for several days and nights, not capable of being moved or of lying down. Her breathing was oppressed and frequent, pulse accelerated and small, and the stomach rejected everything as soon as taken. The abdomen was distended much beyond the size of that of a woman at full period of gestation, and was as tight as a drum. There was dulness on percussion everywhere, and fluctuation was sufficiently distinct. Not being able to change her position, Dr. ATLEE could not make the examination more satisfactorily; but in order to relieve her intense suffering and impending danger he immediately tapped her, and drew away thirty pints of fluid resembling spring-water and

uncoagulable by heat or nitric acid. The upper portion of the abdomen sank in after paracentesis, but there still remained a considerable prominence in the hypogastric region.

All the distressing and alarming symptoms subsided with the tapping, and the patient was placed comfortably in bed.

Two days after, Dr. ATLEE made a careful examination of the patient. He could distinctly make out a tumor occupying the whole hypogastric region. It was irregular in shape, more or less elastic at different points, movable *en masse*, and resembled a multilocular ovarian tumor. The pelvis was free, the uterus quite movable independent of the tumor, and the sound was admitted three inches.

The diagnosis was a multilocular ovarian tumor, complicated with a cyst of the broad ligament.

Dr. ATLEE received the following history from her:

Menstruation commenced at the age of seventeen, and continued to be regular up to the age of fifty. At times it was painful, and until twenty years of age it was profuse, sometimes clotted. In the spring of 1864 she was prostrated by severe flooding, which she thinks was induced by family affliction. This tendency to hemorrhage continuing, she came Eastward to seek professional aid. She respectively sought the best medical and surgical advice in Pittsburgh, Newark, and New York, and the uniform opinion was that she had a uterine fibroid tumor with a concealed polypus. A very small polypus finally extruded from the lips of the uterus, which she detected herself, and after its removal the hemorrhage ceased. During this time, in the summer of 1865, she noticed that she began to "bloat," but subsequently by the use of pareira brava the enlargement disappeared through copious discharges of urine. The swelling of the abdomen returned, and gradually continued to increase in spite of treatment. She finally came to Philadelphia, to be treated by certain female electricians who gave her every assurance of a perfect recovery. Her general health was somewhat improved by the treatment, but the local disorder seemed to have been aggravated. For the last six weeks her distress has been great, and for the last three or four days and nights it has been insufferable. It was at this stage of her illness that Dr. ATLEE first saw her.

Dr. ATLEE said that this was the second instance he had met with of a cyst of the broad ligament having been accompanied with such extreme suffering and danger. In the first case, as in this, relief followed immediately after tapping.

These cysts of the broad ligament, in Dr. ATLEE'S opinion, rarely involve the ovary, and frequently are curable by tapping alone, particularly if a large trocar be used. He has seen cases of these peritoneal cysts, after having been tapped, followed by ovarian tumors, but he does not remember to have met with a case similar to the one above reported, of multilocular ovarian tumor and cyst of the broad ligament conjoined.

In this case Dr. ATLEE advised the patient to avoid an operation so long as the ovarian tumor remained quiescent and the peritoneal cyst did not fill.

Dr. HAMILTON said the history of the case just related by Dr. ATLEE was a gratifying one, as it afforded at least a ground for hope that some of the necessarily dangerous and fatal operations resorted to in such affections might be dispensed with. Might not the great improvement after the tapping be ascribed to the removal of tension,—just as we sometimes see, in cases of dropsy attended with almost entire suppression of the secretion of urine, that a few punctures in the lower limbs, by releasing pressure upon the absorbent system and secretory action of the kidneys, are followed by very copious discharges of urine?

Dr. ATLEE, in reply to Dr. HAMILTON, observed that in all cases of dropsy, whether of the abdomen, the broad ligament, or the ovary, tapping was followed by an increased action of the kidneys for twenty-four or forty-eight hours.

REVIEWS AND BOOK NOTICES.

PROCEEDINGS OF THE TWENTIETH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA, HELD AT STATESVILLE, MAY, 1873. Pamphlet, pp. 81. Raleigh, Stone & Uzzell, 1873.

The proceedings of State medical societies are usually not very interesting except to those who participate in them; and were it not for the very admirable addresses of Drs. Whitehead and T. F. Wood, and the discussion to which the remarks of the latter gave rise, this pamphlet would form no exception to the general rule. Dr. Wood takes very strong ground in favor of the restorative treatment of disease, and supports his views by arguments which, although they seem to us incontrovertible, are not sufficiently cogent to convince Dr. Satchwell, who appears to retain, notwithstanding the recent advances in therapeutics, the lively faith of the preceding generation in the efficacy of mercury and the lancet in the treatment of acute inflammations. This gentleman reiterates in his remarks the same opinions as he expressed in an essay which he read before the Society at its meeting in 1870, and which were severely criticised by Dr. Anstie in *The Practitioner* for December of the same year. If he has read this review, we are sorry to say he has not profited by it, for not only does he still cling to doctrines the fallacy of which has long since been exposed, but he also weakens whatever force his arguments may have by the contemptuous way in which he refers to those who differ from him: classing them together as Todd, Bennett & Co.,—a firm which is, at all events, composed of many of the most scientific physicians and best practitioners of the day. The discussion on the other side was well sustained by Dr. W. A. B. Norcom, whom the Society subsequently chose its president for the ensuing year. Among the papers read is one in which "A Case of Extra-Uterine Pregnancy of Sixteen Years' Standing" is reported. The details of the case are not so fully given as we could wish, but it appears that sixteen years before the patient came under the reporter's (Dr. R. F. Lewis) notice "she became pregnant, and in the usual time gave birth to a child. Soon afterwards she discovered a lump in her right side about the size of a quart cup; this remained without increasing or diminishing in size until about six months before I [the reporter] saw her; she was sitting by the fire, and for some purpose jumped up hurriedly, when she heard something tear in her side. Soon she discovered that the lump was gone, and in a few weeks noticed that her abdomen was increasing in size." She subsequently gave birth to four or five children,—boys and girls. Her condition was discovered during the operation of tapping, which was rendered necessary by the accumulation of fluid in the abdominal cavity. A liquid resembling pus was drawn off, in which was discovered a large quantity of hair. Subsequently an incision three inches in length was made through the abdominal walls, when three rolls of hair were removed, which, after being washed and thoroughly dried, weighed a fraction over four ounces. Some of the hairs are said to have been six or eight inches long. Upon inserting his finger into the abdominal cavity, Dr. Lewis felt a completely-formed but small child in a perfect state of preservation. The husband of the patient objecting to the removal of the child, the abdomen was emptied of a very thick fluid,

—too thick to pass through the largest canula,—and the edges of the wound were brought together with sutures. Union soon took place. In addition to this paper there is a report on "Retroversion of the Uterus," by Dr. R. L. Payne, of Davidson County, and a paper containing the histories of four unusual cases, contributed by Dr. H. O. Hyatt, of Kingston.

THE PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE. By ALFRED SWAINE TAYLOR, M.D., Lecturer on Medical Jurisprudence in Guy's Hospital. Second Edition. Philadelphia, Henry C. Lea, 1873.

The goodly volumes before us are the chef-d'œuvre of their author, so well known by his smaller works on poison and in this country especially by the hermaphroditic American book which we noticed some time since in our columns. The present treatise consists of two volumes of between seven hundred and eight hundred closely-printed pages, and, as the style adopted is concise, contains sufficient space to exhaust the science of which it treats; and we must say that Dr. Taylor has availed himself to the full of the opportunity offered. The author has in this edition considered more fully the general subject of medical evidence, and added also to other parts of the book, especially to the chapter on Wounds and Personal Injuries. The value of the book has also been enhanced by the introduction of many new references. In concluding the announcement, which ought to be all that the present edition needs to insure its sale, we cannot refrain from expressing a desire that books like the present may be more widely read by the profession: if this were so, we might be spared some of the disgraceful court scenes which have brought so much obloquy upon us. The binding of the work is fairly substantial, and very neat; the typography is of that attractive style which indicates English manufacture. If we mistake not, the publisher has imported sheets rather than reprinted the book,—a most commendable procedure, as it is probable that under such arrangement the author gets his crumbs.

EXPERIMENTAL RESEARCHES ON THE CAUSES AND NATURE OF CATARRHUS ÆSTIVUS. By CHARLES H. BLACKLEY, M.R.C.S. Eng. Small 8vo, pp. vii., 202. London, Baillière, Tindall & Cox, 1873.

Judging from the number of new publications to which it gives a title, periodical catarrh must be upon the increase both in this country and Great Britain; and, as our own observation of the number of cases met with confirms this opinion, we think any attempt to throw light upon the subject is entitled to the attentive consideration of the general practitioner.

Mr. Blackley, like most of those who have written upon this malady, is a sufferer from it himself; and it is to the persistence with which its claims to attention have been urged upon him that we owe the lengthy series of experiments upon its causes which are contained in this little volume.

The observations of other writers upon annual catarrh are first reviewed, and their opinions carefully analyzed, after which the author's own experiments are detailed at some length. Through these details it is unnecessary to follow Mr. Blackley, it being sufficient to say that the amount of the catarrhal symptoms was ever found to correspond closely with the amount of pollen found floating in the atmosphere, as demonstrated by the microscope, and that both reached their highest development in the vicinity of grass-fields during the time of hay-making. Mr. Blackley does not hold, with Bostock and others, that heat and light exert an influence upon the symptoms, but regards pollen, and pollen alone, as the exciting cause, going so far as to propose calling it *pollen catarrh*.

Treatment by drugs is of little avail, the only effectual remedy appearing to be the removal of the patient into a region where vegetation is scanty, to which end some of the British watering-places have been tried and are recommended by Mr. Blackley. Our author does not appear to have seen Dr. Wyman's book upon autumnal catarrh, where the advantages of a residence among the White Mountains are detailed, but speaks of Fire Island as a well-known resort of sufferers from this complaint on this side the Atlantic. Long Beach, opposite Tuckerton, a narrow strip of sand upon the New Jersey coast, has also proved of much benefit to many cases within our own knowledge.

Mr. Blackley, indeed, seems only to know of the summer form of the complaint, while that occurring in the fall is of equal frequency in this country, and the existence of which must lead to a modification of his views, which may be thus stated: in a person predisposed by individual peculiarity, often of a gouty family, almost always in the better walks of life, pollen of various kinds produces an irritation of the mucous membrane of the eyes and the whole respiratory tract of greater or less intensity, which is aggravated by light, heat, and sudden atmospheric changes, and this irritation may vary in degree from a slight and trivial catarrh to a violent bronchitis with the most intense dyspnœa.

In conclusion, Mr. Blackley says that summer catarrh appears to be increasing, and accounts for the fact by the growth of luxury which attends the rapid concentration of the population of the United Kingdom within towns, the growth of the manufacturing at the expense of the agricultural interests.

DISEASES AND INJURIES OF THE EAR. By W. B. DALBY, F.R.C.S., M.B. CANTAB., Aural Surgeon to St. George's Hospital.

This book, of little more than two hundred pages, is divided into eleven short lectures on the more important features of "Diseases and Injuries of the Ear." Among the lectures we would single out the fifth as the best, if called upon to make any distinction; but they are all very good, and contain the substance of the diagnostic and therapeutical knowledge of the day so far as it pertains to otology. The anatomical and physiological facts are but lightly touched upon; we suppose, because the author relies upon a preliminary knowledge on the part of those who constitute the class at St. George's Hospital.

In the fifth lecture, already mentioned, the diagnosis and treatment of non-purulent catarrh of the middle ear are carefully and clearly set forth, and furnish, therefore, a very valuable guide to any one who has to treat a case of this disease.

The subject of aural polypi is very thoroughly treated in the seventh lecture, accompanied by some "beautifully executed drawings, showing the structure of these bodies, by Dr. Whipham." Under this head we notice that Dr. Dalby recommends the use of "fine fishing-gimp" instead of wire in the formation of the snare in Wilde's instrument, and after the removal of the polypus.

Dr. Dalby says, "I am in the habit of using chloroacetic acid on a small camel-hair brush, and apply it very freely. At the same time, care must be taken not to touch any part of the meatus."

Those parts of the book which relate to mastoid diseases, to the obscure nervous affections of the auditory apparatus, both acquired and inherited, and to deaf-mutism, are full of interest; but we think more should be said concerning mastoid disease and its treatment, even at the expense of space which is given to deaf-mutism. So much has been done for the relief of mastoid disease, and it now constitutes so important a part of the aural surgeon's work, that no book on diseases of the ear is complete without a very thorough

review of the diagnosis and treatment of this important and tractable malady, while deaf-mutism hardly falls within the province of the aural surgeon, at least not to the exclusion of more remediable troubles of the ear.

The great importance of chronic discharge from the ear is acknowledged and most forcibly enjoined in the following words, which close the eighth chapter:

"But inattention to the discharge may at any time place the patient in a position of great peril. For this reason I believe that a discharge from the ear is regarded by insurance companies as an element against granting a policy, or, at any rate, demanding an increased premium. I can only say that, if it is not so regarded, it would be, if the companies consulted their own interests."

We can but terminate this short sketch by saying that the perusal of this book has been not only instructive but extremely pleasurable, and we are glad to acknowledge the addition of such a volume to the literature pertaining to otology. C. H. B.

GLEANINGS FROM OUR EXCHANGES.

How Cold-Blooded Animals are affected by Low Temperatures.—Dr. Döhnhoff has been making some experiments on this subject, which he describes in *Reichert's Archiv*. He put bees, spiders, and flies on the frozen ground in his garden, under wire covers, the temperature on the ground being —1½° C. The bees were soon apparently dead, the others still moved after five hours. All were then brought into a warm room. The bees did not revive, but the spiders and flies were in a few seconds lively again. On other days the thermometer stood at —3°. The spiders soon ceased to move, while the flies weakly moved their feet the whole time of exposure, eight hours. In the warm room it was found that the spiders were dead; the flies soon flew about. Next evening, at eight, the thermometer showing —3¾°, flies were put in the garden; at eight the following morning the thermometer stood at —6¼°; the flies were apparently dead, but when brought into the room soon revived.

A few days afterwards, the flies were put in a small glass, 1½ inches long and half an inch broad. This was sealed and put in a freezing-mixture of snow and salt, the thermometer in which showed at first —6½°, and after four hours —3½°. The flies kept in the glass all this time were brought into the room, and soon flew about. They were next subjected to a freezing-mixture of —10°, the thermometer in three hours showing —6°; but this killed them.

Leeches were placed in a temperature of —1½°. In an hour they were frozen stiff (but not hard), like pieces of meat which were put beside them. The water in the animals was not all frozen, a concentrated solution (according to physical laws) remaining liquid. If the leeches were cut through with scissors, the section appeared whitish, from ice. Brought into the room, the animals moved about after a quarter of an hour, and, when seized, balled themselves like healthy leeches. Other leeches, kept three hours in a temperature of —1½°, afterwards revived, but could no longer crawl, and died in a few days. Leeches kept a few minutes in a cold mixture at —6¼° were dead.

Silkworm eggs were exposed on the frozen ground twenty-four hours, the temperature varying from —2° to 1°; others to a temperature varying from 4° to —2½°; others to one varying from 7½° to 6°; others were placed in a small glass, and this in a freezing-mixture of —21°, in which they remained five hours, the thermometer at the end of this time showing —15°. The half of each portion of eggs Dr. D. put in small linen-covered flasks, and the flasks in a bag which he carried on his breast during the day, and took into bed with him at night. In a few weeks active worms came out of all the eggs. The other portion of the eggs he had placed in a warm room; some weeks later, worms came out of these also.

These experiments show that cold-blooded animals behave like plants with regard to freezing temperatures. They die like these at different freezing temperatures. The honey-bee dies at —1°; the spider at —3°; the flesh-fly survives a temperature of —6°; the silkworm egg one of —21°. And as there are plants in which the water may be frozen without their dying, there are some animals in which this occurs. In leeches a part of the contained water may be frozen; the silkworm egg may be frozen solid, without life being extinguished.

In the spiders and flies exposed to freezing temperature a part of the water was frozen; but, as contraction of the muscles still took place in a temperature at which pieces of meat were frozen stiff, it is improbable that their muscles were frozen. The freezing of the water in leeches puts an end to all motion. They move at 0°, but at —1½° are quite still.—*Boston Journal of Chemistry.*

On Inflammation of the Thoracic Duct.—Dr. Chouppe, of Paris, has just published a thesis in which he has collected five cases of the above rare and, as yet, not well-known affection. The five cases collected by Dr. Chouppe are the only ones hitherto placed on record. In three of the cases the inflammation was secondary, and in two primary. In order to distinguish this latter form from the former, Dr. Chouppe has conducted a series of experiments on animals. The points brought out by the two cases and by the author's experiments are very interesting. In both cases the inflamed thoracic duct had thrown a quantity of pus into the general circulation through the subclavian vein, and it might be said that the patients had had a sort of pyæmia through an internal course; yet, during life, typhoid fever, meningitis, and articular rheumatism were successively suspected, whilst purulent infection was not even thought of. Another point of interest was the obliteration of the subclavian vein in one of the cases; it could only, however, have occurred during a late period of the disease, as symptoms of pus in the blood had been previously observed. Notwithstanding the great importance of the thoracic canal, as conveying all the chyle produced by digestion, and the most part of lymph, no disturbance in the digestive organs or in the functions of nutrition was observed. Moreover, Dr. Chouppe stated the existence of pulmonary infarctus, caused, according to him, by the pus producing embolisms. The other symptoms were redness of the surface in various parts, inflammation of the sheaths of tendons, and of several joints. In both primary cases the onset of the disease was sudden: in one case it came on with violent pain in the stomach and intense fear; in the other, with a violent and protracted fit of rigor. In the two cases these symptoms were followed by high fever, prostration, loss of strength and flesh.

Dr. Chouppe has arrived at the following conclusions on the important questions which he has investigated: Primary inflammation of the thoracic duct does exist; it is attended by general symptoms of purulent infection and by local symptoms; it cannot be diagnosed as yet during life by the help of known symptoms, but its presence may be suspected; it is likely that it has been sometimes overlooked, and that it occurs occasionally. —*Medical Times* (*Canada*).

Scleroderma.—Dr. Arthur Van Harlingen, in a concise and well-written paper upon this subject, in the *American Journal of Syphilography and Derma-*

tology, October, 1873, relates a case which came under his observation, and also makes an analysis of scleroderma in general. The object of the communication is to point out the clinical features of the disease and to show its distinctive character in opposition to those views which would connect it with other affections of a more or less similar character.

The following definition is proposed:

"Scleroderma is an affection of the skin, characterized by diffused symmetrical hardening, and generally accompanied by more or less pigmentation. Beginning in some particular locality, without febrile disturbance, swelling, or œdema, the induration spreads with greater or less rapidity over a considerable extent of surface. The affected parts fade gradually into those which remain healthy, without any distinct line of demarcation, and they are on a level with the general surface, neither raised nor depressed, and contain no tubercles or other elevations. The temperature of the affected surface is either normal or slightly depressed. The general sensibility, as well as the functions of the glands, are unaffected, save in the advanced stages of the most severe cases. It runs a chronic course, uninfluenced, or nearly so, by therapeutical applications, and has no tendency to a fatal termination.

"Pathologically, the disease consists essentially in a great increase in the fibrous elements of the corium and papillary layer, decrease of fat in the subcutaneous connective tissue, and deposit of pigment in the lower layers of the epidermis and in the rete."

This definition, Dr. Van Harlingen holds, will exclude the well-known case of Rasmussen, which has been frequently quoted as one of scleroderma, but which, it is maintained, is wanting in most of the characteristic features of scleroderma.

Scleroderma and the keloid of Addison are separated and considered as entirely distinct diseases.

SHOCK AND SYNCOPE (*The Practitioner*, October, 1873).—Dr. T. Lauder-Brunton, in an able paper, reviews the causes, symptoms, pathology, and treatment of shock and syncope. He believes painful impressions,—more especially extensive burns,—injuries to bones, and, above all, injuries to the abdominal viscera and genitals, to be the principal causes of shock, which is usually attended with pallor and coldness of the skin, weak pulse, oppressed and sighing respiration, dilated pupils, and sickness. There are two chief factors in the production of shock: first, the stoppage of the heart from the paralyzing influence of a sudden and violent injury to the nerves, and second, as a result of the same influence, dilatation of the vessels, particularly those of the abdomen. These two enable us to account for all the observed symptoms,—the weak pulse, the low arterial tension, the pallor and coldness of the surface, etc.

Syncope probably depends chiefly on dilatation of the arterioles, and its duration is less than that of shock, because of the greater contractility of these vessels than of the veins.

In the treatment of shock we endeavor to counteract the feebleness of the heart by stimulants,—one of the most powerful of which is heat: so we apply warmth to the surface, especially over the cardiac region, and at the same time give brandy and ether internally. A still more important indication is to cause contraction of the great veins in the abdominal and thoracic cavities, so that the blood, instead of stagnating uselessly in them, may be sent onward to the heart. Painful impressions on the sensory nerves will often have this effect,—strong mustard plasters, thrashing the feet and legs with switches, etc. Digitalis, as possessing the power of contracting the vessels and strengthening the pulsations of the heart, is of great value, and should be given freely. In syncope the first idea is to restore the circulation to the brain; and this we do by laying the head on a level with the body or even somewhat lower. The next thing is to raise the blood-pressure; and, as the condition is due to dilatation of the arterioles *of the surface*, we pursue a plan of treatment directly opposite to that employed in shock, and dash cold water in the face and chest and hurry the patient from a warm room into the cold air, in order to cause contraction of those vessels. For the same reason we apply ammonia or aromatic vinegar to the nose.

TREATMENT OF ORCHITIS WITH NITRATE OF SILVER (*Pacific Medical and Surgical Journal*, October, 1873).—Dr. W. E. Whitehead states that his plan of treatment for orchitis has been as follows. Rest in bed, and the application of a thorough coating of a solution of nitrate of silver—forty to eighty grains to the ounce—to the scrotum of the affected side, first having the scrotum well washed in soap and water; the administration of small doses of Epsom salts and tartar emetic dissolved in water, and repeated as often as once in four hours; support to the testicles, and low diet. In some cases it is only necessary to make one, or at most two, applications of the solution of nitrate of silver to the scrotum; but sometimes it becomes necessary to paint once a day for three or four days before the swelling and pain are arrested. When the whole testicle is painful, hot, and swollen, stretch the scrotum over it gently, and then apply the solution with a camel's-hair brush; but when the testicle is not so seriously implicated, merely draw the scrotum lightly over the epididymis portion, and apply the solution in the same way. One application is generally sufficient to relieve the extreme pain and at once arrest the inflammation and distressing sense of tension in the testicle, and the lumbar pain that follows the course of the spermatic cord. When the inflammation runs high, give tartar emetic in nauseating doses, otherwise in much smaller quantities.

POST-MORTEM NOTES ON THREE CASES OF HANGING (*Indian Medical Gazette*, September 1, 1873).—G. G. MacLaren, M.B., had the opportunity of making post-mortem examinations on the bodies of three criminals who had suffered death from hanging. In none was there any emission of semen or fæces. In two there was great congestion of the brain, attended in one case with effusion into both lateral ventricles. In the other there was little congestion, but some sub-arachnoid effusion. The lungs were collapsed and anæmic, the heart normal, and the pericardium partially filled with fluid in all three cases. In one there were dislocation between atlas and axis, and rupture of the odontoid ligaments; in another, dislocation and rupture of ligaments between the axis and third cervical vertebra; and, in the third, dislocation between the atlas and the occipital bone.

In two cases reflex movements were noticed for a few minutes after the drop fell, but in the third case not a single movement could be detected.

THE DETECTION OF ORGANIC MATTERS IN THE AIR.—At the Chemical Society of Berlin, Prof. Smee proposed a method for discovering the organic matters contained in the air by means of distillation by cold. A glass funnel, with the tubes stopped, is filled with ice and held suspended in the air. The humidity of the air is condensed upon the outside of the funnel along whose surface it trickles, to drop in a little basin beneath. This liquid is weighed. It contains ammonia, usually, which is separated and its quantity determined by well-known methods. The quantity of organic matter in the air is then approximately estimated by that in the liquid. It is possible in this way also to arrive at the odorous principle in flowers.—*The Druggist*, August, 1873.

A New Reaction of Alcohol (*Le Progrès Médical*, August 23, 1873).—The discovery of alcohol in organic liquids is often of great difficulty, owing to the small quantity of liquid which the chemist has at his disposal, and the absence of any distinguishing test. We owe to M. Bertholet an obvious and characteristic reaction.

In the presence of cold or lukewarm water benzoic chloride ($C_{14}H_5ClO_2$) is only decomposed with extreme slowness, but, on adding alcohol to the liquid, benzoic ether is immediately formed, and is thrown down in excess. The presence of this ether becomes apparent if a few drops of the liquor are heated with a solution of caustic potash; the chloride only is decomposed, while the ether remains unaffected. This reaction is very evident with a liquid containing one per cent. of alcohol, and allows us to dispense with distillation.

Evacuation of a Portion of Bowel.—The following case occurred in the wards of Dr. Demarquay, at the Hospice Municipal. A boy of fifteen was taken with a violent fit of vomiting, colic, and diarrhœa, after eating some sugar-plums painted in red, green, and blue. The stomach was tense and swollen, and six worms, together with three bits of a fleshy substance, like boiled liver, were thrown up. Twenty other worms were afterwards successively vomited. On the fifteenth day the patient evacuated a piece of thickish, slimy membrane, about an inch broad and twenty inches long, and into which the finger could be introduced like a glove. After this the boy went on lingering, with frequent attacks of diarrhœa, and, though the appetite was good, he gradually lost flesh. The attacks were doubtless occasioned by the fecal mass reaching the retracted portion of the soldered bowel. The patient died, but a post-mortem was not allowed to be performed. *London Lancet.*

MISCELLANY.

What are Instinctive Actions?—This is really, to the thoughtful man who is learned on the subject, a most intensely difficult question. A paper on this subject appears from the pen of Mr. George Henry Lewes, in *Nature*, and is well worthy of perusal. The author states, among other things, that the fact that we require some character to distinguish the instinctive from the impulsive actions may be readily shown. No one calls breathing, secretion, excretion, etc., instincts. Yet these are the actions of congenital tendencies in the organism. "A hungry chick," says Mr. Spalding, "that never tasted food, is able, on seeing a fly or spider for the first time, to bring into action muscles that never were so exercised before, and to perform a series of delicately adjusted movements that end in the capture of the insect." Every one would pronounce this a typical case of instinct. Now compare with it the following, which no one would class among the instincts: A newborn animal that has never breathed before is able, on first feeling the stimulus of the atmosphere, to bring into action a very complicated group of muscles which were never so exercised before, and to perform a series of delicately adjusted movements which end in the aeration and circulation of the blood. This contrast may lead us to the character sought. Understanding that every line of demarcation in psychical phenomena must be more or less arbitrary, and only justified by its convenience, we may draw such a line between impulse and instinct. Impulses are the actions which from the first were fatal, inevitable, being simply the direct reflex of the stimulated organs. Given the respiratory organs and the atmosphere, respiration is the inevitable result. Given the secretory organ and the plasma, secretion is the inevitable result. There is no choice: the action either takes place, or it does not.—*The Lens.*

Destruction of Life in India.—The numbers of people destroyed by wild beasts constitute an extraordinary feature of Indian life. The loss of life is very great in some districts, and in others it is less only because goats are abundant, and the wolves prefer kids when they can get them. No fewer than 14,529 persons lost their lives by snake-bites in 1869, and in 1871 there were 18,078 deaths reported as caused by dangerous animals of all classes; but Dr. Fayrer is of opinion that systematic returns would show that there are more than 20,000 deaths annually from snake-bites. The inhabitants of the border-lands between jungle and cultivation are killed and eaten by tigers in such numbers as to require the serious attention of the government. In Lower Bengal alone 13,401 human beings were killed by wild beasts in six years, and 40 in South Canara in the single month of July, 1867. The chief commissioner of the Central Provinces has to report 946 persons killed by tigers in three years ending with 1869. There are difficulties in the way of extirpating tigers: the natives regard the man-eating tiger as a kind of incarnate and spiteful divinity, whom it is dangerous to offend, and it is the desire of a few in India actually to preserve tigers for sport. Mr. Frank Buckland has suggested an organized destruction of the tiger-cubs in the breeding-season, and the attraction of full-grown tigers to traps by means of valerian, of which these animals, like cats, are exceedingly fond.—*British Medical Journal.*

Cinchona in India.—A parliamentary paper on the progress of India in 1872 gives information respecting the cultivation of the cinchona-plant, which was introduced into the hill districts in 1860. The total expenditure of the experiment was £61,719. There are now 2,639,285 plants in the government plantations on the Neilgherry Hills alone, without counting those of private planters in this and other districts. The largest trees are 30½ feet high, and over three feet in girth round the trunk. The area covered by the plantations amounts to 950 acres, and is being largely added to every year. The bark under cultivation is stated to be much richer in quinine and other alkaloids than the wild bark of South America. During last year 7295 pounds of excellent bark were sold in the London market, while 65,688 pounds were supplied to the local manufactory. This year 20,000 pounds will be sent home. The alkaloid is manufactured on the spot in an exceedingly cheap form for the use of local medical stores, and hundreds of fever-patients are thus annually cured. The object of providing an abundant supply of the febrifuge at a price within the means of the popula-

tion at large is rapidly being realized.—*British Medical Journal.*

NÉLATON.—The *London Lancet* says, "Authors have not sufficiently insisted on the peculiar timidity and shyness which characterized his general demeanor, so much so that those who might have feared him as a competitor relied on this retiring disposition, and apprehended no rivalry, especially as he was known to have considerable property. But his success with Garibaldi and the favor of the Emperor worked wonders. It is a pity that the circumstance which gained him the Imperial Court drove a colleague of his into an asylum for the insane. Jobert (de Lamballe) had for some time secured the confidence of the Emperor, when the Empress and her suite met with a carriage-accident in Switzerland. The telegram sent to Paris said, 'Let Jobert start at once, or, in his absence, Nélaton.' Unfortunately for the former, he was out of town, and Nélaton went down to Switzerland. His services and his manner won the Empress; poor Jobert was supplanted, and he took the change to heart in such a manner that his mind became unhinged. Nélaton from that period rose with wonderful rapidity. He attended some time afterwards the Czar's son at Nice, his honorarium on that occasion amounting to £16,000."

A DANGEROUS OFFENDER IN CUSTODY.—A man named J. Ryan was arrested in New York, September 27, by Deputy Marshal Crowley, charged with sending obscene literature through the mails. He waived an examination and gave bail in $5000 to await the action of the grand jury. Ryan has been known by the following aliases: Clinton Medical and Surgical Institute, Dr. John Harvey, Dr. Bell, and Prof. Draper, all of No. 147 East Fifteenth Street; Lucille Demarre, and Lucille Demarre & Co., and Edgar Tremaine, of Station D; Martin Dutton & Co., Nos. 704, 708, 735, 767, and 776 Broadway, and also various numbers in Nassau Street; Marcus L. Bryan, No. 64 Cedar Street; J. Bryan, M.D., of No 84 Cedar Street; Dr. J. Bryan, No. 96 East Thirteenth Street; Clinton Medical and Surgical Institute, No. 249 South Tenth Street, Philadelphia, and a place in Baltimore. The great sawdust and swindling firm named W. T. Mason & Co., of No. 182 Fulton Street, is also run by Ryan. It is expected that the case will go before the grand jury at an early date.—*Medical and Surgical Reporter.*

FRESH MEAT FROM AUSTRALIA.—The Melbourne correspondent of the *Times* writes that Mr. T. S. Mort, aided by Mr. Nicolle, of the ice-works, has succeeded, after years of unremitting labor and costly experimenting, in discovering a cheap and safe means of applying cold to all perishable articles of food, and is now making great preparations for freezing meat for shipment, and keeping it frozen during the voyage to England. The cattle are to be slaughtered and the carcases frozen at Bowenfells, on the other side of the Blue Mountains, about a hundred miles from Sydney. By railway they will be conveyed in trucks adapted to the traffic to the depot in Sydney. The depot, which is a building within a building for the sake of isolating the interior or cold chamber, is capable of holding one thousand tons of frozen meat, and is to contain machinery calculated to produce cold equivalent to sixty tons of ice every twenty-four hours. The agent employed in the production of cold on land is ammonia, and Messrs. Nicolle and Mort have erected extensive works in connection with the gas-works for its manufacture.—*British Medical Journal.*

VEHICLE FOR THE ADMINISTRATION OF CHLOROFORM.—A French medical journal remarks that the best course is to dissolve the chloroform in glycerin (1 : 3), which is effected with tolerable facility, and gives a very clear solution, pleasant to the taste, and with a strong odor of chloroform. This solution can be mixed in all proportions with water, without the occurrence of any precipitation, though the odor is distinctly perceptible. In forming the mixture, it is well to add the chloroform slowly and to mingle the two thoroughly. It should be left at rest for twenty-four hours; at the expiration of this period a portion of the chloroform will be found to have collected at the bottom of the vase; this should be separated and mixed with an additional part of glycerin, when no further separation will occur. This mixture may be kept for some time without any loss of chloroform by evaporation.—*Boston Journal of Chemistry.*

MUTTON or beef suet can be thoroughly purified by the process of M. Auguste Bermond, of Nice, as follows:

Take twenty-five pounds of perfectly fresh suet, and cut into small pieces, and pound it well in a mortar; after it is well crushed, wash it with cold water repeatedly, so long as the washings are not clear. Then melt over a slow fire, and add about one ounce powdered alum, and two ounces common salt, and let them come to a boil for a few seconds; then strain through a fine cloth into a deep pan, and let it stand for about two hours to allow the impurities to settle; which separate, and put the clean grease into the pan, and add to it one quart rose-water and one and a half ounces of powdered gum benzoin; then heat it gently and remove the scum as long as any arises. Finally, put into a pan and let cool, when the purified suet may be taken off the sedimentary water.

Thus purified, it will keep for an indefinite period without change or turning rancid.—*The Druggist.*

JOHN AUBREY, who was at Harvey's funeral and "helpt to carry him into the vault," writes, "I have heard him [Harvey] say, that after his booke of the Circulation of the Blood came out, he fell mightily in his practice, and 'twas believed by the vulgar that he was crack-brained; and all the physitians were against his opinion and enoyed him. All his profession would allow him to be an excellent anatomist, but I never heard of any that admired his therapeutique way. I knew several practitioners in this town [London] that would not have given 3*d.* for one of his bills [prescriptions], and that a man could hardly tell by one of his bills what he did aime at."

THE BLIND IN PRUSSIA.—From official inquiries, it appears that in the year 1871 there were in the Prussian dominions 22,143 blind persons, or 89 blind persons in each 100,000 of the population. The highest numbers were in the provinces of Posen and Prussia, where there were respectively 107 and 106 blind per 100,000; the lowest number, 7, was found in Hohenzollern. These remarkable differences appear not to depend alone on the geographical position of the several provinces; for Pomerania shows a smaller proportion than any of the southern provinces except Hohenzollern. The number of blind in proportion to the population has greatly increased in the last ten years: in 1859 there was one blind person in 1649 of the population, while in 1871 there was one in 1111. In the sixteen institutions for the blind in Prussia there were only 549 pupils.—*British Medical Journal.*

ELECTRIC LIGHT.—A company in Paris are now making an improved electrical machine for producing the electric light. It is provided with four plates, and when made to revolve three hundred and fifty times per minute affords a light equal to two hundred and thirty or three hundred gas-burners. A steam-engine of two and a half horse-power serves to run the machine, which costs the nice little sum of 8000 francs ($1600 gold). This is not so very expensive, when we remember that a few pounds of charcoal will produce as brilliant an effect as could be had from twenty pounds of rape-seed oil. The light is well adapted to light-houses, ships, and large halls; and why not for lighting city streets? A few of these scattered about the city would greatly relieve the dangers attendant upon a gas strike.—*Journal of Applied Chemistry.*

LYING-IN-HOSPITAL AT JERUSALEM.—This hospital, established by the Baroness B. de Rothschild, is doing excellent work. Dr. Loudon, the director of the institution, lately issued a report, from which we find that 120 females were received at the hospital during the past year; 48 of these were born in Jerusalem, 24 were Russian born, and 19 came from various parts of Turkey. Each inmate on leaving receives a donation of ten francs, and clothing for herself and child. The early period at which marriage is celebrated in Palestine is shown by the fact that two of the mothers were only fifteen years of age; three had reached sixteen years; five, seventeen years; nine, eighteen years; four, nineteen years; and fifteen had reached their twentieth year.—*Lancet.*

PRESENCE OF ALCOHOL IN THE HUMAN URINE.—After having shown that urine on putrefying produces alcohol, M. Béchamp has sought to discover alcohol in the urine of persons who have previously been subjected to a *régime* of abstinence from wine and alcoholic drinks. In the urine collected in these conditions, and in which fermentation had been prevented by the addition of a little creosote, M. Béchamp has found enough alcohol to be able to set it on fire. In one of the experiments there was enough alcohol in two litres of urine to be determined by the alcoholometer. The author believes that the liver produces alcohol physiologically.—*New York Med. Record.* (This is confirmatory of the researches of our countryman Dr. Ford, who years ago obtained alcohol from the blood of animals which had lived lives of strict teetotalism.—ED. *P. M. T.*)

IN a rather scarce book, called "Mems., Maxims, and Memoirs, by William Wadd, Esq., F.L.S., Surgeon Extraordinary to the King. London, 1827," I find, on page 21, the following note or memorandum:

"Mr. Paul, a surgeon at Stroud, in Gloucestershire, lately extracted from the kidneys of a woman, by an incision through her back, a rough stone as large as a pigeon's egg, and made an entire cure: it is the first of the kind ever performed in this kingdom."—*New York Med. Rec., from Gentleman's Magazine* for Aug. 1733.

AN EXPERIMENT WITH SAFRANIN.—Safranin is now often employed to impart to silk a rose-red color. If a few particles of the pure dye are placed in a porcelain dish, and one or two drops of concentrated sulphuric acid allowed to fall upon it, and stirred with a glass rod, a most beautiful blue color is produced. On adding a drop or two of water it changes to a brilliant emerald-green. By alternately adding a drop of acid or of water, nearly all the colors of the rainbow may be produced.—*Journal of Applied Chemistry.*

THE entries at the German universities for the year 1873-4 are 7467; 3904 being for the winter, and 3563 for the summer session. The number of medical students is 2479. The total number is 851 less than the previous year, when it was 8318, there being a falling off of 444 in the medical entries alone.

DR. STELLWAG VON CARION, the eminent ophthalmologist, has been appointed to the additional professorship of Clinical Ophthalmic Surgery, instituted in the University of Vienna.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM OCTOBER 28, 1873, TO NOVEMBER 10, 1873, INCLUSIVE.

MCPARLIN, T. A., SURGEON.—Assigned to duty at Fort Leavenworth, Kansas, as Post-Surgeon. S. O. 169, Department of the Missouri, October 31, 1873.

GHISELIN, JAMES T., SURGEON.—So much of S. O. 206, October 15, 1873, as relates to Surgeon Ghiselin, is revoked. S. O. 217, War Department, A. G. O., November 3, 1873.

MCCLELLAN, ELY, ASSISTANT-SURGEON.—Relieved from duty at Headquarters Department of the South, and to return to his proper station, Lebanon, Kentucky. S. O. 189, Department of the South, October 31, 1873.

WOLVERTON, W. D., ASSISTANT-SURGEON.—Leave of absence extended thirty days. S. O. 219, War Department, A. G. O., November 5, 1873.

KNICKERBOCKER, B., ASSISTANT-SURGEON.—Assigned to duty at Camp Harney, Oregon. S. O. 146, Department of the Columbia, October 17, 1873.

WATERS, W. E., ASSISTANT-SURGEON.—Relieved from duty at Fort Leavenworth, Kansas, and assigned to duty at Fort Riley, Kansas, as Post-Surgeon. S. O. 169, Department of the Missouri, October 31, 1873.

KIMBALL, J. P., ASSISTANT-SURGEON.—Leave of absence extended thirty days. S. O. 99, Headquarters Military Division of the Missouri, November 5, 1873.